

INTERNATIONAL SEARCH REPORT

PCT/GB 03/02487

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C12Q1/68 A61K38/00 C07K16/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 C12Q A61K C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, EMBL, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|---|-----------------------|
| X | WO 00 71566 A (BRISTOL MYERS SQUIBB CO) 30 November 2000 (2000-11-30) page 32, nucleotide 296 is a "T", i.e. this corresponds to Exon 14 variant of the present application, represented in SEQ ID No 16 as nucleotide 1991. claims 2,9 | 1-10 |
| A | —/— | 11-13 |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

29 September 2003

Date of mailing of the international search report

14/10/2003

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| X | <p>DATABASE EMBL 'Online! 30 November 2001 (2001-11-30)</p> <p>MAO Y ET AL: "Human tissue anion rotation polypeptide 41 coding sequence" retrieved from EBI</p> <p>Database accession no. AAI65135 XP002254957</p> <p>Nucleotides 334 ("G") and 996 ("T") correspond to the exon 9 and 14 variants of the present application, represented in SEQ ID No 16 as nucleotide 1339 and 1991 respectively.</p> | 1-10 |
| X | <p>& CN 1 303 937 A (SHANGHAI BORONG GENE DEV CO LTD) 10 July 2001 (2001-07-10) page 17 -page 18; claim 6</p> | 1-10 |
| A | <p>EP 1 186 672 A (ASTRAZENECA AB) 13 March 2002 (2002-03-13) the whole document</p> | 1-11 |
| P,X | <p>EP 1 264 843 A (MILLENIUM PHARMACEUTICALS INC) 11 December 2002 (2002-12-11)</p> <p>SEQ ID No 22 at position 785 is a "T." This corresponds to the Exon 4 variant of the present application, represented in SEQ ID No 16 as nucleotide 505.</p> | 1-10 |
| A | <p>ULBRECHT M ET AL: "Assoziation of beta 2-adrenoreceptor variants with bronchial hyperresponsiveness" AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE, AMERICAN LUNG ASSOCIATION, NEW YORK, NY, US, vol. 161, no. 2, February 2000 (2000-02), pages 469-474, XP002188594 ISSN: 1073-449X the whole document</p> | 1-4 |
| A | <p>DATABASE EMBL 'Online! Homosapiens organic anion transporter polypeptid, 17 May 2000 (2000-05-17)</p> <p>PIZZAGALLI F ET AL: "Identification of a new human organic anion transporter polypeptide OATP-F 14" retrieved from EMBL</p> <p>Database accession no. af260704 XP002205066 abstract</p> | |

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| A | IIDA ARITOSHI ET AL: "Catalog of 258 single-nucleotide polymorphisms (SNPs) in genes encoding three organic anion transporters, three organic anion-transporting polypeptides, and three NADH:ubiquinone oxidoreductase flavoproteins" JOURNAL OF HUMAN GENETICS, XX, XX, vol. 46, no. 11, 2001, pages 668-683, XP002245996 | |

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claim 9 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claim 10 relates to the use of a compound (drug) transportable by OATPF in preparation of a medicament for treating a disease in a human determined as having a polymorphism defined in claim 10.

In this particular case, the functional features of the drug used in the medicament is defined by the results to be achieved, namely that the drug/medicament is useable for treating a disease in a human and wherein said disease is associated with one of the selection of polymorphisms detailed in claim 10. Further definition of such disease is neither detailed in the claim or in the body of the patent application.

The claim covers all compounds (drugs) having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds (drugs). In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the compound (drug) by reference to a result to be achieved, and for an undefined disease(s). Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the compounds (drugs) mentioned on page 11, lines 27 - 31 of the description, without restriction to a specific disease.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

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| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
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| | | BR 0010552 A | | 13-02-2002 |
| | | CA 2374729 A1 | | 30-11-2000 |
| | | CN 1351612 T | | 29-05-2002 |
| | | EP 1183270 A2 | | 06-03-2002 |
| | | HU 0201303 A2 | | 28-08-2002 |
| | | JP 2003500039 T | | 07-01-2003 |
| | | PL 351652 A1 | | 19-05-2003 |
| | | WO 0071566 A2 | | 30-11-2000 |
| CN 1303937 | A 18-07-2001 | NONE | | |
| EP 1186672 | A 13-03-2002 | EP 1186672 A2 | | 13-03-2002 |
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| | | US 2002090622 A1 | | 11-07-2002 |
| EP 1264843 | A 11-12-2002 | EP 1264843 A2 | | 11-12-2002 |
| | | US 2002165357 A1 | | 07-11-2002 |